U.S. Department of Interior
Bureau of Land Management
Roseburg District, Oregon

Environmental Assessment

Summit Creek Coarse Wood Redistribution Project

EA No. OR - 104 - 04 - 05

The Swiftwater Field Office proposes to harvest excess windthrown timber on approximately 15 acres of mature forest located in the Siuslaw sub-basin located in Section 26; T20S R6W, W.M. The excess would be used for log placements within stream to improve fish habitat and the remainder made available for commercial sale. This project is within the Late-Successional Reserves Land Use Allocations.

Acronyms Used:

ACS	-	Aquatic Conservation Strategy
BLM	-	Bureau of Land Management
BMP's	-	Best Management Practices
CWD	-	Coarse Woody Debris
EA	-	Environmental Assessment
ID Team (IDT)	-	Interdisciplinary Team
LSR	-	Late-Successional Reserve
LSRA	-	Late-Successional Reserve Assessment
NEPA	-	National Environmental Protection Act
NFP or NWFP	-	Northwest Forest Plan
PDC	-	Project Design Criteria
RMP	-	Resources Management Plan
ROD	-	Record Of Decision
S&G	-	Standards & Guidelines
T&E	-	Threatened or Endangered

Definitions:

Coarse Woody Debris: Those portions of trees that have fallen to the ground and are at least 20" in diameter.

Large Organic Debris: Organic debris, regardless of size, within stream channels.

Large Woody Debris: Trees or large portions of trees that lie within the stream channel and riparian areas.

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INTRODUCTION

This Environmental Assessment (EA) has been prepared for the Swiftwater Field Office's proposed **SUMMIT CREEK COARSE WOOD REDISTRIBUTION PROJECT**. An EA is a site specific analysis of potential environmental impacts that could occur as the result of the implementation of a federal action. The EA assists the Agency in project planning, ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from analyzed actions. "Significance" as defined by NEPA is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a "Finding of No Significant Impact" (FONSI). The FONSI is a document that briefly presents the reasons why implementation of the proposed action will not result in "significant" environmental impacts (effects) beyond those already addressed in the Roseburg District's *Proposed Resource Management Plan / Environmental Impact Statement* (PRMP/EIS, October 1994).

A Decision Record will be completed after the FONSI is signed to document the decision. A notice of this decision will be placed in *The News Review*, a daily newspaper of general circulation in Roseburg, Oregon.

I. PURPOSE OF AND NEED FOR ACTION

This section provides a general overview of the proposed action. Included are: the need for the action, purpose of the action, a general description and objectives of the proposal, and conformance with existing land use plans. The issues that were identified as pertinent to this project are analyzed in Appendix D.

A. Need for Action

The *Roseburg District Record of Decision and Resources Management Plan* (RMP, June 1995) guides and directs management on BLM lands. It "responds to dual needs: the need for forest habitat and the need for forest products" [RMP, pg. 15].

"The need for forest habitat is . . . for a healthy forest ecosystem with habitat that will support populations of native species and includes protection for riparian areas and waters . . . [RMP, pg. 15]." **The need for a healthy forest ecosystem** can be met by "Design[ing] and implement[ing] watershed restoration projects in a manner that promotes long-term ecological integrity of ecosystems … and attains Aquatic Conservation Strategy objectives" (pg. 28). In 1997, a wind event affected the Upper Siuslaw River / Siuslaw Falls subwatershed of the Upper Siuslaw River Watershed. Several additional blowdown events have occurred since then, increasing the size of the impact to approximately 20 acres. Approximately 70 percent of the stand has blown down leaving excessive amounts of down woody debris. The *Smith River Watershed Analysis* (October 31, 1995) identifies a lack of in-stream structure as a limiting factor affecting the quality of fish spawning and rearing habitat (pg. 55). This watershed presents an opportunity to improve the fisheries habitat by placement of logs into streams to meet the lack of in-stream structures (pg. 61). Course woody debris from the blowdown area in excess of on-site needs would provide a ready source of logs to meet the need to restore fisheries habitat.

"The need for forest products . . . is . . . for a sustainable supply of timber and other forest products that will help maintain the stability of local and regional economies . . . on a predictable and long-term basis" (RMP, pg. 15). There is a need to recoup the loss of the timber resource through salvage of timber (RMP, pg. 60) that is in excess of the need for down wood on the forest floor and in-stream coarse wood in the Smith River Watershed.

B. Purpose of Action

The purpose of the action described in this EA is to offer the Summit Creek Coarse Wood Redistribution Project for contract award in fiscal year 2004 or later. The following objectives would be accomplished by the proposed action:

1. **Key Watershed:**
   Pursue watershed restoration projects to conserve watershed conditions for at-risk anadromous salmonids and resident fish species (RMP, pg. 20).

2. **Fisheries Habitat:**
   ". . . enhance the fisheries potential of streams . . ." (RMP, pg. 40).

3. **Late-Successional Reserve:**
   Protect and enhance conditions of late-successional and old-growth ecosystems (RMP, pg. 29) by reducing higher than normal levels of down wood that could increase fire hazard.

4. **Timber Salvage:**
   Salvage timber in excess of watershed needs to provide a resource to the local timber economy.

C. Description of the Proposal

The Swiftwater Field Office of the Bureau of Land Management (BLM) proposes to harvest excess windthrown timber in the Siuslaw sub-basin located in Section 26; T20S R6W, W.M. (see maps, Appendix A through C), and stock pile logs at the Cleghorn (Township 21 South, Range 7 West, Section 5) and/or the Salmonberry (Township 20 South, Range 7 West, Section 25) stock pile sites for subsequent redistribution to meet the identified coarse woody debris needs for selected streams within the Upper Smith River Watershed. Excessive course wood in amounts beyond the need for instream log placements or down wood within the stand would be available for commercial salvage. Approximately 20 acres were analyzed for potential salvage harvest activities. Section II (pg. 4) of this EA provides a more detailed description of the Proposed Action Alternative. The actual placement of logs is not a part of this analysis; however, log placement was analyzed in the *Upper and Middle Smith River II Restoration and Rehabilitation* EA (EA # OR-104-00-01).

D. Conformance with Existing Land Use Plans

The Proposed Action and all alternatives were developed to be in conformance with the *Final - Roseburg District Proposed Resource Management Plan / Environmental Impact Statement* (PRMP/EIS) dated October 1994 and its associated *Roseburg District Record of Decision and Resources Management Plan* (RMP) dated June 2, 1995. The RMP was written to be consistent with the *Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old Growth Forest Related Species Within the Range of the Northern Spotted Owl* (FSEIS); dated Feb. 1994 and its associated *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (ROD) and *Standards and Guidelines for Management of Habitat for Late-Successional and Old Growth Related Species Within the Range of the Northern Spotted Owl* (S&G's) dated April 13, 1994; generally referred to as the "Northwest Forest Plan" (NFP) and the *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines*. All treatment of noxious weeds would be in compliance with the *Roseburg District Noxious Weed EA*.

The Northwest Forest Plan (ROD, pg. 6) divides the federal landbase into seven land use allocations or categories. This project is within the "Late-Successional Reserve" land use allocation. These areas are established to "protect and enhance conditions of late-successional and old-growth forest ecosystems . . ." (RMP, pg. 29). Although this project does not include lands within the Riparian Reserve land use allocation the Standards and Guidelines for the Riparian Reserve would be applied to ". . . areas along all streams, wetlands, ponds, lakes, and unstable or potentially unstable areas . . ." (ROD, pg. 7).

II. ALTERNATIVES INCLUDING THE PROPOSED ALTERNATIVE

This section describes the No Action and Proposed Action alternatives, and any alternatives considered but eliminated from detailed analysis. These alternatives represent a range of reasonable potential actions that would meet the Purpose and Need. This section also discusses specific design features that would be implemented under the action alternatives.

A. The No Action Alternative (Alternative A)

The No Action Alternative is required by NEPA and provides a baseline for the comparison of the alternatives. This alternative represents the existing condition. If this alternative were selected all blowdown would be left on-site. There would be no harvesting of logs in excess of on-site needs and use of the excess to meet in-stream needs in Smith River and provide a commercial source of logs to the local economy. In-stream placement in Smith River would have to come from another source. The site would continue to carry a high level of down wood.

B. The Proposed Action Alternative

Implementation of the Proposed Action Alternative would result in the facilitation of watershed restoration activities in streams within the Upper Smith River Watershed. Practices would consist of salvage harvest. **Salvage harvest** is designed to remove excess windthrown trees from the stand. The excess logs would be removed through skyline cable logging and occur on 15 acres (five acres were dropped from consideration). Approximately 75 percent of the volume removed would be stockpiled for instream fisheries projects and 25 percent (720 MBF) would be sold on the log market. Some standing green trees (corridor trees) could be felled to facilitate the removal of the down trees being harvested. **Firewood cutting and salvaging** of logging debris (slash) could occur in landing cull decks. The **burning of landing cull decks and slash piles** could occur as a means of reducing fire hazard.

C. Project Design Criteria and Management Practices as part of the Action Alternative

This section describes mitigating measures designed to avoid, minimize or rectify impacts on resources that would be incorporated with the implementation of the action alternatives. Project Design Criteria (PDC's) are site specific measures, restrictions, requirements or physical structures included in the design of a project in order to reduce adverse environmental impacts. Additionally, the RMP (Appendix D, pg. 129) lists "Best Management Practices" (BMP's) and the ROD lists "Standards and Guidelines" (S&G's). BMP's are measures designed to protect water quality and soil productivity. S&G's are ". . . the rules and limits governing actions, and the principles specifying the environmental conditions or levels to be achieved and maintained" (S&G, pg. A-6).

1. **To meet the objective to protect and enhance conditions of the late-successional ecosystem (RMP, pg. 30):**
   a. All standing live trees would be retained except those needed to provide reasonable access to down trees. Up to 45 trees (three trees per acre) were assumed needing to be cut for this analysis.
   b. Adequate coarse woody debris (CWD) would be retained in quantities and species composition similar to natural stands.
   c. All logs present on the forest floor before the disturbance event would be retained.
   d. All snags (except those considered a safety hazard) would be retained.

2. **To meet the objectives of the Aquatic Conservation Strategy (ACS) (RMP, pg. 19):**
   The objectives of ACS are to be met at the fifth-field watershed scale and over the long-term (decades). The following describes how the project level PDC's assist in contributing toward attainment of these broader objectives:

   a. **Riparian Reserves (ACS Component #1)** were established. Riparian Reserves consist of (1) lands incorporating permanently flowing (perennial) and seasonally flowing (intermittent) streams, (2) the extent of unstable and potentially unstable areas that may directly impact streams, and (3) wetlands, ponds, and reservoirs. This project is within the Late-Successional Land Use Allocation; however the Riparian Reserve PDC's would be included with the project to protect riparian features:

1). Streambank stability would be maintained by establishing a 20 foot buffer along existing streams. Logs extending into the buffer would either be left in their entirety or only portions removed that lay outside the buffer. Logs that suspend the stream would be left if cutting would result in damage to the streambank. No green trees would be cut within this buffer.

2). Riparian habitat would be protected from logging damage by yarding logs away from or parallel to the streams (i.e. logs would not be yarded across streams, streambanks, or the inner gorge unless fully suspended through the riparian zone where possible). NOTE: It would not be physically possible to fully suspend over the short intermittent stream in Unit #1.

b. **Key Watersheds (ACS Component #2)** were established "as refugia . . . for maintaining and recovering habitat for at-risk stocks of anadromous salmonids and resident fish species [RMP, pg. 20]." This project is not in a Key Watershed, however the logs salvaged from the project would benefit the Upper Smith River Watershed which is a Key Watershed. An objective in Key Watersheds is to "Give highest priority to watershed restoration . . ." in these areas (RMP, pg. 20).

c. **Watershed Analysis (ACS Component #3)** for the Siuslaw and Smith River Watersheds were used in these analyses and are available for public review at the Roseburg District office.

d. **Watershed Restoration (ACS Component #4)** for the Upper Smith River Watershed would result in ultimate placement of logs in stream reaches that have been identified as having a deficiency in coarse wood structure essential for quality fish habitat.

2. **To minimize soil erosion as a source of sedimentation to streams and to minimize soil productivity loss from soil compaction, loss of slope stability or loss of soil duff layer:**

a. **Measures to limit soil erosion and sedimentation from roads** would consist of: (1) Restricting log hauling and log decking to unsaturated soil conditions (normally April 15 to November 15). Operations would be suspended during and after storm event cycles that raise the surface soil moisture above field capacity (when water can be squeezed out of the soil). This season could be adjusted if unseasonable conditions occur (e.g. a delayed storm season). (2) Maintaining or improving existing roads to fix drainage and erosion problems by blading and surfacing with crushed rock as needed.

b. **Measures to limit soil erosion and sedimentation from logging** would consist of: (1) Restricting logging and yarding to unsaturated soil conditions (normally April 15 to November 15). Operations would be suspended during and after storm event cycles that raise the surface soil moisture in the Units above field capacity (when water can be squeezed out of the soil). This season could be adjusted if unseasonable conditions occur (e.g. a delayed storm season). (2) Requiring skyline yarding where cable logging is specified. This method limits ground disturbance by requiring at least partial suspension during yarding (i.e., the use of a logging system that "suspends" the front end of the log during in-haul to the landing, thereby lessening the "plowing" action that disturbs the soil). (3) In some limited, isolated areas partial suspension may not be physically possible due to terrain or lateral yarding. Excessive soil furrowing would be hand waterbarred and filled with limbs or other organic debris. (4) Logs being yarded with rootwads attached would be chosen so as to reduce yarding distance and ground disturbance.

3. **To provide wildlife habitat components:**

a. Nesting and roosting habitat for cavity dwellers would be provided by maintaining existing hard or soft snags at least 20" inches in diameter and 15 ft in height (PRMP/EIS, Appendices 226) to the greatest extent possible. Any snag deemed as hazardous to worker safety could be felled at the discretion of the operator and the Project Inspector. Such trees would be reserved and left in place as CWD. Past experience has been that less than five percent of snags need to be felled for this reason.

b. Approximately 850 cu ft/acre of blowdown trees in Decay Classes 1-2 (more recent blowdown with bark intact) would be reserved on-site as Coarse Woody Debris. All existing CWD of Decay Classes 3-5 (older down trees with bark absent or trace) would be reserved (see Appendix D, paragraph D). A total of 1730 cu ft/acre of CWD would be maintained on site (South Coast LSRA).

c. Approximately 30 trees that could provide suitable nesting platforms for the marbled murrelet (i.e., have limbs and/or platforms greater than four inches in diameter) would be reserved from falling. In addition, tailhold trees would not be permitted to be felled. Standing trees needing to be felled for yarding purposes would be left on site for down woody debris.

4. **To protect the residual stand and late seral habitat:**

a. Yarding corridors would be pre-designated and approved by the Sale Administrator. Corridors would be selected to utilize natural openings and corridor trees would only be felled when absolutely necessary to yard the logs. Damaged rub trees would be left standing for future snag recruitment.

b. Yarding would be done with a swing yarder. The skyline cable path would be adjusted to avoid damage to standing trees. Cable yarding would be done under the canopy to avoid damage to tree crowns.

5. **To protect air quality:**

Any burning of landing piles would have an approved "Burn Plan" and be conducted under the requirements of the Oregon Smoke Management Plan and done in a manner consistent with the requirements of the Clean Air Act.

6. **To prevent and report accidental spills of petroleum products or other hazardous material and provide for work site cleanup:**

During operations described in this proposal, the operator would comply with all applicable State and Federal laws and regulations concerning the storage, use and disposal of industrial chemicals and other hazardous materials. Accidental spills or discovery of the dumping of any hazardous materials would be reported to the Project Inspector and the procedures outlined in the "Roseburg District Hazardous Materials (HAZMAT) Emergency Response Contingency Plan" would be followed. Hazardous materials (particularly petroleum products) would be stored in durable containers and located so that any accidental spill would be contained and would not drain into watercourses. All landing and work site trash and logging materials would be removed from the project area.

7. **To prevent and/or control the spread of noxious weeds:**
Stipulations would be incorporated into the logging contract to prevent and/or control the spread of noxious weeds. This would include the cleaning of logging equipment prior to entry on BLM lands (BLM Manual 9015 - Integrated Weed Management) as well as roadside brushing and/or herbicide application prior to the start of management activities in the proposed project area.

8. **To protect Special Status and SEIS Special Attention Plants and Animals:**
a. Special Status (Threatened or Endangered, proposed Threatened or Endangered, Candidate, State listed, Bureau Sensitive, Bureau Assessment, or Special Provision) and Special Attention plant and animal sites would be protected where needed, according to established management recommendations (RMP, pg. 42).

b. In order to mitigate potential disturbance effects to marbled murrelets that may be nesting within 100 yards of Units #1 and #2 and the Cleghorn stockpile site, operations would be limited to between two hours after sunrise to two hours before sunset (Daily Operating Restrictions [DOR]) from April 1 until August 5.

c. If, during implementation of the proposed action, any Special Status Species are found that were not discovered during pre-disturbance surveys; operations would be suspended and appropriate protective measures would be determined before operations would be resumed.

9. **To protect cultural resources:**
Stipulations would be placed in the contract to halt operations and evaluate the appropriate type of mitigation needed to provide adequate protection; if any objects of cultural value (e.g. historical or prehistorical ruins, graves, fossils or artifacts) are found during the implementation of the proposed action that were not found during project evaluation.

E. Alternatives Considered but Eliminated

An alternative to helicopter yard the project was considered. This would result in less ground disturbance plus provide an opportunity to place logs in Smith River at the same time. This alternative was not considered viable because of the logistics, coordination and costs associated with helicopter logging. Helicopter logging would exceed Title II funding available to implement this project. Additionally there are concerns with noise disturbance to owl areas, safety issues with flying root wads, and a lack of adequate helicopter landings in the project area; therefore this alternative was eliminated from further analysis.

F. Issues to be Analyzed

Since this project occurs within the Late-Successional Reserve it is paramount that any activities would continue to maintain a functioning late-successional ecosystem. The ID Team therefore identified the following issue as having sufficient potential affect to warrant more detailed analysis. This issue is addressed in Section IV, "Environmental Consequences" (pg. 14) as a key issue:

Can excess CWD be removed from the project in order to provide for fish habitat needs in the Upper Smith River Watershed without diminishing LSR habitat suitability now or in the future (NFP S&G, pg. C-13)**?**

III. AFFECTED ENVIRONMENT

This section describes the existing environment and forms a baseline for comparison of the effects created by the alternatives under consideration. This section does not attempt to describe in detail every resource within the proposed project area that could be impacted but only those resources which could be substantially impacted. Appendix F (Analysis File) contains data and additional supporting information used by the interdisciplinary team (IDT) to describe the affected environment.

This project lies within the Oregon Coast Range Physiographic Province. The FSEIS describes the affected environment for this province on page 3&4-21. The Roseburg District Proposed Resource Management Plan/Environmental Impact Statement (PRMP/EIS, pp. 3-3 through 3-71) provides a detailed description of BLM administered lands on the Roseburg District. A further description can also be found in the Siuslaw River Watershed Analysis.

A. General Setting

Site Description - The proposed project is located within the Upper Siuslaw River fifth-field watershed which covers approximately 127,600 acres and the Upper Siuslaw River / Siuslaw Falls sixth-field subwatershed which covers approximately 17,100 acres. The haul route is located within the Upper Smith River Watershed and Headwaters Smith River Subwatershed.

Stand Description – This natural stand is composed predominately of Douglas-fir trees that are about 100 years of age. Older trees are interspersed, some with large dead limbs extending the full length of the stem from near the ground to the base of the live crown, and some with large fire scars resulting in hollow stems and blackened cavities. There are some pole and sapling sized western hemlocks in the understory. Douglas-fir regeneration is occurring in some of the area. The forest floor is covered with trailing blackberry, sword fern, salal, Oregon grape, ocean spray and hazel.

The initial blow down event occurred in 1997 as a result of strong southwesterly winds hitting timber along the boundaries of recent clear cut harvests. Subsequent wind events have caused more trees to fall. It has been estimated that approximately 10,500 cubic feet of down wood per acre (350 tons/acre) are now on the ground. Canopy closure is variable within the blowdown area, ranging from little change to openings of approximately ¼ acre or more and estimated to be 28 percent or less. The wind thrown trees created some snags (standing dead) by stripping limbs and breaking tops.

B. Affected Resources

The RMP (pg. 41) requires that all proposed actions be reviewed ". . . to determine whether or not special status species occupy or use the affected area or if the habitat for such species is affected." Special Status Species are those listed as threatened or endangered (T&E), or species proposed for listing under the under the Endangered Species Act (ESA) of 1973, as amended; or species designated as Bureau Sensitive or Bureau Assessment. Bureau Sensitive species are species eligible for federal or state listing or candidate status and Bureau Assessment species are species not presently eligible for listing or candidate status under the ESA but are of State concern and may require protection or mitigation in the application of BLM management activities. The affected area was surveyed for the resources listed below according to established protocols:

Botany - No Special Status Plants have been observed in the project area to date. There are scattered infestations of noxious and invasive weeds (Scotch broom, Canada thistle, Tansy ragwort, Himalayan blackberry) within, and in the vicinity of, the project area.

Cultural Resources - No cultural resources were found in the project area.

Hydrology - Unit 1 contains two intermittent streams that combine and become perennial just outside the unit. Unit 2 contains one intermittent stream. These streams are tributaries of Smith Creek, a tributary of the Siuslaw River. No wetlands were found within the project area. Beneficial Uses of Water in the project area consists of benefits to aquatic life and wildlife. Downstream Beneficial Uses of Water consist primarily of domestic water supply, irrigation, livestock watering, and fish and aquatic life. There are no waterbodies in the project area on the Oregon Department of Environmental Quality's 2002 303(d) List of Water Quality Limited Waterbodies (ODEQ, 2003 (b)). The project area is 2.9 miles upstream of the Upper Siuslaw River which is listed for: (1) excessive summer temperature which impairs salmonid rearing and (2) insufficient dissolved oxygen which impairs aquatic life and salmonid spawning and rearing (ODEQ, 2003 (a) and (b)). Drainage from the haul route flows into Summit Creek which is a tributary to Smith River. The haul route is adjacent to Summit Creek 0.1 miles from the confluence with Smith River. Smith River is listed for excessive summer temperature which impairs salmonid rearing (ODEQ, 2003 (a) and (b)).

The characteristics of climate (e.g. precipitation type and timing), elevation, and geomorphology all contribute to the way watersheds move and store water. This project area has an average annual precipitation of 50 inches, occurring primarily between October and March. Elevation ranges from 1200 to 1400 feet in the project area. Precipitation occurs primarily as rain at lower elevations (< 2,000 feet) and only under unusual climatic conditions does snow accumulate below 2,000 feet. The Transient Snow Zone (TSZ) is defined as areas between 2,000 to 5,000 foot elevation that may alternately receive snow or rain. None of the project area is within the TSZ.

Fisheries - According to the Smith River WA (pg. 46), Coastal Cutthroat trout (*Oncorhynchus clarki*), Oregon Coast Steelhead trout (*Oncorhynchus mykiss*), Oregon Coast Chinook salmon (*Oncorhynchus tshawytscha*), Oregon Coast Coho (Oncorhynchus kisutch) and Pacific Lamprey (*Lampetra tridentata*) are present in the watershed. The Oregon Coast Coho has been proposed for listing by the National Oceanic and Atmospheric Administration (NOAA - fisheries) under the Endangered Species Act as a threatened species. There are no fish-bearing streams in the project area. The nearest fish-bearing streams to the project area are Summit Creek within the Upper Smith River Watershed and Smith Creek within the Upper Siuslaw Watershed. Both are approximately 0.5 mile from the project. Oregon Department of Fish and Wildlife (ODFW) stream habitat surveys (1994) indicate that streams within the Upper Smith River Watershed lack large wood and have high sediment inputs. Summit Creek data indicates that large wood is lacking, much of the substrate is dominated by bedrock, and there is a high percentage of fine sediment within the stream channel. **Essential Fish Habitat** (EFH) is designated by the Magnuson-Stevens Fishery Conservation and Management Act of 1996 as habitat that is currently or was historically available to Oregon Coast coho and chinook salmon (Federal Register 2002 Vol. 67, No. 12). There is no EFH adjacent to the project area.

Soils and Geology - The soils of the project area were formed over the sandstones and siltstones of the Tyee Formation. They are well drained and primarily shallow to moderately deep (10-40 inches) over highly fractured, soft bedrock that has low shear strength. The trees are anchored in this weak bedrock material. The incompetence of the bedrock, combined with steep-sloped ridgeline topography and exposure to the prevailing southwest winds are contributing factors to the blowdown susceptibility of this stand. Evidence of past scarps and logs in adjacent stands indicates historic blowdown in this vicinity. Unit 1 contains slopes greater than 65% with lower gradients near the creek. There are recent small inner gorge sloughs adjacent to the main stream and small scarps left by the recent blowdown. Unit 2 contains slopes greater than 65%, but overall steeper than the western portion. The scarps are larger due to trees sliding downhill after blowdown occurred. Pockets of trees remain in both units with a higher percentage standing in Unit 1. The slopes are relatively stable based on the following combination of site conditions: planar slopes that are not hummocky, lack of tension cracks, shallowness of the soils, good soil drainage, and shape of the conifer boles (being relatively straight). However, the slopes that are greater than 65% can be considered potentially unstable since they can become unstable with changing site conditions. They are potentially unstable due to their steepness, the presence of recent small failures along the inner gorge, and the presence of small blowdown-created slides along Unit 2. The haul route leading from the project area to Smith River Road is along rocked roads although deficient in spots.

Wildlife - Federally Threatened and Endangered (T&E) Species known to occur in the Roseburg District include the northern spotted owl (*Strix occidentalis caurina*), marbled murrelet (*Brachyramphus marmoratus*), and bald eagle (*Haliaeetus leucocephalus*). The remaining T&E terrestrial species are not known to occur in the Roseburg District**.**

The nearest known **northern spotted owl** site (Smith Creek West) is approximately 0.80 miles from the Summit Creek project area. This project contains 15 acres within Designated Critical Habitat (CHU-OR-53) for the spotted owl. Critical Habitat is defined as a specific geographical area specified by the US Fish and Wildlife Service (FWS) in Recovery Plans as containing habitat essential for the conservation of a Threatened and Endangered species. The project area is adjacent to a 100 year old stand of nesting, roosting, and foraging habitat. Within the proposed extraction units, canopy closure is estimated to be approximately 28%. The standing trees remaining after the blowdown tend to be widely spaced with short crowns and little interlocking canopy. There is a patch of standing trees in Unit #1 near the stream that are more dense, the crowns are deeper, and there is more interlocking canopy (relative to the rest of the extraction units). The proposed extraction units are not currently spotted owl habitat since the stand is very open and trees with suitable nesting structures (e.g. cavities, snowbreaks, and other large platforms) are absent.

Proposed project occurs within the 35-50 mile zone from the coast (Zone 2) for the **marbled murrelet**. The project area contains approximately 15 acres of Designated Critical Habitat for the murrelet (CHU-OR-04-i). The project area is adjacent to a 100 year old stand of suitable, unsurveyed murrelet habitat. The proposed extraction units are not currently suitable murrelet habitat even though there are trees with potential platforms because those trees are largely exposed and the stand is very open as described in the previous paragraph. During 1997-1998, nine survey stations over three sites were surveyed for marbled murrelets without any detection. The identified stockpile sites (Salmonberry and Cleghorn) are within the 0-35 mile zone from the coast (Zone 1). The Salmonberry stockpile site is approximately 0.26 mile from suitable, unsurveyed murrelet habitat and suitable spotted owl habitat. The Salmonberry stockpile site is approximately 1.17 miles

from the nearest known owl site (Amberson Creek). The Cleghorn stockpile site is adjacent to suitable murrelet habitat that was surveyed to protocol in 1998-1999. There were no murrelet detections near the Cleghorn stockpile site. The Cleghorn stockpile site is approximately 0.83 mile from the nearest known owl site (Hardenbrook Creek) and is adjacent to suitable owl habitat.

The nearest known **bald eagle** site (Brad's Creek) is more than 16 miles away and would not be affected by disturbance above ambient noise levels. There was one eagle sighting from the project area (personal observation, Clough & Holt; Nov. 2003) but species was not confirmed. The sighting was either an adult golden eagle (*Aquila chrysaetos*) or a juvenile bald eagle.

Bureau Sensitive Species - Although there are no known sites, the fisher (*Martes pennanti*), northern goshawk (*Accipter gentilis*), purple martin (*Progne subis*), and western pond turtle (*Clemmys marmorata*) may occur within the project area. The most recent fisher sighting on the Roseburg District occurred near Drain, OR in 1975. Even though there are no recent fisher sightings, the project area could be used by fishers for hunting and as a travel corridor. Nesting habitat for Northern goshawks is typically open stands of mature and late-seral conifers such as those found in the project area. Goshawks were surveyed for (Summer 2004) with no detections. The nearest known purple martin colony is approximately eight miles away in T21S-R4W-Sec. 7. The blowdown events created openings in the canopy of the project area which may be used by purple martins for foraging. Western pond turtles may use upland habitat to over-winter but it is unlikely that the proposed action would impede the ability of the project area to provide over-wintering habitat for this species. Bureau Assessment and the remaining Bureau Sensitive Species are not suspected to occur within the project area.

IV. ENVIRONMENTAL CONSEQUENCES

This section provides the analytical basis for the comparisons of the alternatives. The reasonably foreseeable environmental consequences (impacts, effects) to the human environment that each alternative would have on selected resources are described. Impacts can be beneficial or detrimental. This section is organized by the alternatives and the effects on any key issue identified in Appendix D, as well as the selected resources. Analysis considers the **direct impacts** (effects caused by the action and occurring at the same place and time), **indirect impacts** (effects caused by the action but occurring later in time and farther removed in distance but are reasonably foreseeable) and **cumulative impacts** (effects of the action when added to other past, present and reasonably foreseeable future actions). Short-term generally refers to the time of the action up to the first year after the action but may be as long as ten years. Long-term may be a year or more but generally more than ten years.

The Roseburg RMP/EIS analyzes the environmental consequences in a broader context. This EA does not attempt to reanalyze impacts that have already been analyzed in these documents but rather to identify the particular site specific impacts that could reasonably occur. Environmental effects to the "Critical Elements of the Human Environment" are analyzed in Appendix D and E.

When encountering a gap in information, the question implicit in the Council on Environmental Quality regulations on incomplete and unavailable information was posed: Is this information "essential to a reasoned choice among the alternatives"? (40 CFR 1502.22(a)). While additional information would often add precision to estimates or better specify a relationship, the basic data and central relationships are sufficiently well established that any new information would not likely reverse or nullify understood relationships. Although new information would be welcome, no missing information was determined as essential for the decision maker to make a reasoned choice among the alternatives. Surveys for T&E wildlife species (i.e. marbled murrelets and northern spotted owls) are not planned specifically for the proposed project, but the Project Design incorporates features to mitigate potential disturbance (if any) to T&E species.

A. No Action Alternative

This alternative would not meet the Purpose and Need (objective) of the EA (pg. 2) of providing a supply of logs for placement in streams and timber for the local economy.

Stands - Allowing blowdown trees to remain on the forest floor would not affect the stand. The risk of Douglas-fir beetles killing live Douglas-fir trees as a result of the blowdown trees is long past (see Silvicultural Report, Appendix F). The increased risk of stand damage as a result of fire entering the heavy fuels in the blowdown area is considered a low to moderate risk. Existing ridgetop road access and cooler east and north aspects would make fire suppression activities easier. There are excessive amounts of CWD on the ground beyond what is required for habitat considerations. The project area is adjacent to private timberlands that have slash loadings that have not been mitigated. An abundance of large fuels alone does not pose a high fire risk; however, when combined with large amounts of fine fuel on and adjacent to the site, an elevated risk of a stand replacement event is present.

Wildlife Habitat - No direct impacts are anticipated under this alternative. The stand and downed woody habitat elements are expected to continue to function in their current capacity in the short-term. Wildlife populations and diversity would also be expected to remain static in the short-term.

The indirect impacts would include a gradual increase in canopy closure and further development of an understory layer which could cause a reduction in habitat for some species (e.g. ground squirrels, some lizard and snake species) while developing habitat for others (e.g. fishers). Existing structural features of standing trees (i.e., snow breaks, forked tops, decay, etc.) would be maintained, fostering the creation of nesting habitat for spotted owls and cavity-nesting birds. Existing accumulations of Coarse Woody Debris would be maintained and those accumulations would continue to decay providing habitat for terrestrial amphibians, reptiles, and small rodents. Canopy closure would eventually result in competitive mortality, thereby creating snags and recruiting Class 1 and 2 Coarse Woody Debris as habitat.

Soil Productivity - "Long-term soil productivity is the capability of soil to sustain inherent, natural growth potential of plants and plant communities over time" (RMP/EIS, pg. 4-12). Harvest and haul-related impacts to the soil, and mitigation of existing sedimentation sources as described

previously would not occur; therefore there would be no change in soil productivity. The project area has a moderately-low risk of landslides which would be most likely to occur at the slope break, where slope changes abruptly becoming very steep. The Oregon Department of Forestry storm impacts and landslide study (Oregon Department of Forestry, 1999) indicated that failures were least likely in stands in the 31 to 100 year age class; however the patch openings present in the project area increases that risk slightly. This assessment is also based on indicators of potential instability seen in the field. The likely size of any landslide occurring under the no action alternative would be small (less than 0.1 acre). Given the position of the slope break, the likelihood of any landslide reaching a stream would be moderate.

Water Quality and Hydrologic Processes - There would be no direct impacts to water quality or hydrologic processes and no change to the Beneficial Uses of Water. The land along the slope break of the intermittent headwater streams would be at a slight risk from small natural landslides. The small streams in the project area have low capacities for **sediment transport**. Small landslides in low order streams would result in a short-term increase in sedimentation until the material is dispersed downstream and potential for a short and long-term increase in large wood. Effects of sediment in the stream bed from small landslides have a low probability of being detected more than a few hundred feet downstream from the landslide during normal flow conditions.

The large amounts of course woody debris would remain in the project area resulting in greater risk of a stand replacement wildfire as discussed in Stands section above. Such an event would result in an increase in **water yield** due to a reduction in evapotranspiration from the loss of vegetation. This effect is greatest in the headwater streams, such as those in the project area, which tend to burn more thoroughly than in larger streams (Minshall, *et al.*, 1989, pg. 707). In terms of **stream temperature**, the short-term benefit of increased summer flows by increased water yield would be offset by reduction in stream shade in areas burned. Barring a stand replacement event, there would be no change in stream temperature, **water chemistry**, water yield, or **peak flows** as a result of this alternative**.**

Fisheries Habitat – Since current temperature, sediment inputs, woody debris and hydrologic processes would continue to function at existing rates and levels as described above, fish species and populations would remain relatively unchanged. There would be no associated direct impacts under this alternative because the environment would not be affected by activities of the proposed action. Large woody debris material for the Smith River Restoration Project would have to be obtained through other means such as incidental road side salvage or direct cull log purchases.

B. Proposed Action Alternative

Stands - The Proposed Action would not result in stand regeneration to early seral conditions, therefore there would be no change in the amount or percentage of late-successional type forests on Federal lands within the Upper Siuslaw River Watershed. Salvage operations in this specific case should facilitate habitat recovery by enabling a better chance for successful natural regeneration of an understory. This would be the result of disturbance of forest floor shrubs and forbs and scarifying of soils by the yarding of logs thereby providing a mineral seedbed. Removing a substantial amount of the excess CWD would also help reduce the risk of a future stand replacing fire.

Key Issue: Can excess CWD be removed from the project in order to provide for fish habitat needs in the Smith River area without diminishing LSR habitat suitability now or in the future?

No potential spotted owl or marbled murrelet nest trees would be removed through the proposed project. There are standing green trees that are expected to be removed for the yarding corridors. These corridor trees lack suitable nesting structures for spotted owls and marbled murrelets. The canopies of these corridor trees do not interact with other trees that do have potential nesting structures for owls or murrelets. There is the potential that cable-yarding may inadvertently remove an unknown number of lower-lying limbs from both potential nest trees and trees without potential platforms in the patch of denser standing trees in Unit 1. There is also the potential that some of those limbs could be greater than four inches in diameter making them potential murrelet platforms. Even with the potential loss of occasional limbs no currently suitable nest tree for marbled murrelets is expected to be rendered unsuitable by the proposed action.

It has been estimated (BLM cruise, 1999) that approximately 10,500 cubic feet of Decay Class 1 and 2 wood volume/acre is now on the ground. The Oregon Coast - South Portion LSRA (Table 12, page 61) suggests an appropriate level of down wood for mature forests to be 1,731 cubic feet/acre. Based on data collected from other coast range stands on the Roseburg District, it is estimated that approximately 49% of that volume (49% of 1,731 cubic feet/acre = 848 cubic feet/acre) is Decay Class 1 or 2 logs. Therefore, approximately 850 cu ft/acre of blowdown trees in Decay Classes 1-2 would be reserved as Coarse Woody Debris (RMP, pg. 30). Existing down wood in Decay Classes 3-5 would be left on site. Total amounts of Coarse Woody Debris expected to remain on site in all Decay Classes would be expected to be at least 1,800 cubic feet/acre. Natural regeneration is expected to continue in this area therefore no site preparation and tree planting is planned. An understory of Douglas-fir and western hemlock should establish a secondary canopy, one of the components of late-seral habitat.

In conclusion: 1) removal of logs and root wads would not change the character or ability of the stand to develop into nesting, roosting, and foraging habitat for the spotted owl or suitable nesting habitat for the murrelet, and 2) Down woody debris would persist at levels suggested by the LSRA.

Wildlife Habitat - Direct Impacts to T&E Species - The removal of up to 45 corridor trees to facilitate the yarding of blowdown would modify one of the primary constituent elements of Designated Critical Habitat for both spotted owls and marbled murrelets, and requires consultation with USFWS. An unknown number of the tailhold trees needed for cable-yarding are expected to be potential nest trees for both spotted owls and murrelets. The tailhold trees are planned to be retained and not removed/modified and therefore should retain their capability to function after the project. Heavy equipment and chainsaws are expected to be used in the proposed action. Following the Project Design Criteria outlined in the Summit Creek BA, daily operating restrictions (DOR) for Zone 2 are required to mitigate effects to murrelets which may be nesting within 0.25 mile of Units #1 and #2. No seasonal restrictions are necessary to mitigate for disturbance to spotted owls since the nearest known owl site is 0.8 miles away. Heavy equipment is expected to be used at the stockpile sites but no suitable murrelet or spotted owl habitat would be removed or modified. Since Salmonberry is 0.26 mile away from suitable, unsurveyed murrelet habitat and the nearest spotted

owl site is 1.17 miles away, no seasonal restrictions are necessary to mitigate disturbance effects to these species. Since Cleghorn had no detections during protocol surveys in 1998-1999 and the nearest spotted owl site is 0.83 mile away, no restrictions are necessary to mitigate disturbance effects to nesting murrelets and spotted owls even though it is adjacent to suitable habitat. If the proposed project is not implemented before the survey clearance expires for murrelets (April 1, 2005) at Cleghorn, then Daily Operating Restrictions (April 1st – August 5th) would be applied to the use of heavy equipment at this stockpile site to mitigate possible disturbance effects to nesting murrelets.

Indirect Impacts to T&E Species - The proposed project would remove some Decay Class 1 and 2 Coarse Woody Debris from 15 acres but would not change the character or ability of the stand to develop into nesting, roosting, and foraging habitat for the spotted owl or suitable nesting habitat for the murrelet.

Direct Impacts to Bureau Sensitive Species – Removal of some of the downed woody material from the project area may reduce the over-wintering opportunities for western pond turtles and simplify the structural complexity of the forest floor that fishers use by an unknown amount. However, there will still be approximately 850 cubic feet/acre of Decay class 1 and 2 downed woody material following the proposed action so the project area is still expected to function for these species although at an unknown, perhaps reduced level. The removal of coarse woody material as proposed is not expected to alter the suitability of this stand for nesting by northern goshawks or the potential colonization by purple martins. The felling of up to 45 live trees to facilitate yarding is not expected limit the ability of the stand to provide nesting habitat for northern goshawks or purple martins. Potential nest trees are not expected to be removed due to protection afforded suitable marbled murrelet and/or spotted owl nest trees PDC's (see paragraphs II.C.1.a. and II.C.3.c.). Snags suitable for purple martin nesting are not expected to be removed due to the protection afforded snags in the PDC's (see paragraphs II.C.1.d. and II.C.3.a.). Indirect Impacts to Bureau Sensitive Species – There are no anticipated indirect effects to Bureau Sensitive species beyond the described direct effects.

Soil Productivity - The most common impacts to soil productivity from management activities include: 1) losses due to displacement/compaction; and 2) erosion, either surface erosion or mass wasting (PRMP/EIS, pg. 4-12). Since cable yarding reduces ground disturbance, impacts to soil productivity from the action would be limited to 1-2% of the skyline yarded ground and would be mainly superficial (four inches or less) compaction and displacement; however moderate compaction would occur within yarding lanes. Given that there would be minimal green trees cut and operations would not occur during saturated soil conditions, there would be minimal increase in landslide potential.

Water Quality and Hydrologic Processes - Effects from management activities that could potentially impact the water quality and hydrologic processes include: 1) increase in stream sedimentation, transport, and storage from timber felling, yarding, and haul; 2) increase in water temperature from stream canopy reduction; 3) increase in water yield from timber harvest; 4) increase in peak flows and change in timing of peak flows from timber harvest; and 5) change in water chemistry from slash burning.

In the absence of harvest-related landslides (indirect impact), **in-stream sedimentation** from harvest and haul is not expected to be measurable in streams and would not be above existing background levels. Some direct pathways for short-term soil displacement and potential sediment delivery may occur as a result of localized soil disturbance from cable yarding. Harvest related erosion should be limited due to the use of cable yarding and full suspension where possible. Streambank stability would be maintained by the 20 foot buffer along existing streams with no cutting of green trees or logs inside this buffer. A short intermittent stream in Unit 1 may have partial suspension across it; however, the impacts to streambank stability and erosion potential should be minimized due to the presence CWD and its armoring effect to the streambank and vegetation with strong root strength stabilizing the banks. Excessive soil furrowing during harvest would be hand waterbarred and filled with limbs or other organic debris to reduce erosion and minimize likelihood of sediment transport to streams. Burning would be accomplished on landings and any sediment resulting from the burn would be filtered into the forest floor.

Any sediment associated with the use of Cleghorn and Salmonberry landings for stockpiling logs would also be filtered into the forest floor before reaching any stream system. Blading and spot rocking the haul route combined with dry season haul would minimize road erosion. Overall, ditch lines are adequately vegetated to filter sediment and prevent ditch erosion on the haul roads. Road-related short-term sedimentation into streams corresponding to first season flush periods would not be distinguishable from background levels. Stream sediment effects from landslides due to the proposed action would essentially be no different from that of the no-action alternative.

Summer **stream temperature** would not be altered from this action due to the following: (1) the streams in the project area are intermittent and not likely to be flowing water during the summer when stream temperature is at its highest (2) very few shade producing trees would be cut, and (3) no trees would be cut within 20 feet of the stream.

Since there would only be a few trees cut for yarding corridors and the project area is not located in the TSZ, there would be no direct change to **water yield or peak flows** resulting from the action alternative. The proposed action would reduce the large amount of coarse woody debris to a level recommended in the Late Successional Reserve Assessment (1996) thereby reducing fuel load and the risk of stand replacing fire. This would in turn reduce the likelihood of an increase in water yield resulting from a stand replacing event. Given the filtering capacity of the forest floor and the distance to the streams, there would be no change in **water chemistry** from the prescribed slash pile burns on the landings. There would be no direct change to the Beneficial Uses of Water as a result of this alternative.

Fisheries Habitat - Actions potentially affecting the fisheries habitat include: 1) altering amounts of large woody debris within the riparian areas (PRMP/EIS, pg. 4-48), and 2) stream sedimentation due to timber yarding, road improvements and timber hauling.

Intermittent streams within the blowdown units are approximately 0.5 mile from the fish-bearing portion of Smith Creek. No direct impacts or indirect impacts are anticipated from the yarding activities due the proximity to fisheries habitat and operational PDC's. As indicated above, these PDC's include, but are not limited to a 20 foot no-harvest buffer to the intermittent streams, dry season operations, cable yarding operations, and mitigation measures for any potential excessive soil furrowing.

By following the LSRA recommendations appropriate levels of **large woody debris** within the riparian area would be maintained. Due to the distance of the project area to fish-bearing habitat (0.5 mile), redistribution of blowdown material would not have any effect on large wood recruitment to the downstream fisheries habitat. Stream surveys of the project area determined that there are sufficient amounts of existing large organic debris (LOD) within intermittent stream channels. The LOD would not be impacted as a result of the 20 foot no-harvest buffers.

Impacts of **sedimentation from the haul road activity** to the aquatic environment was considered, however is difficult to quantify or measure (Brown, 1985). However, no direct impacts to the aquatic environment are expected from haul road activities because and timber hauling activities would be conducted during dry season conditions. The amount of sediment that could enter the stream would be reduced though restricting timber hauling and yarding to unsaturated soil conditions (normally April 15 to November 15) and filtered by the vegetated ground cover between the road and the stream channel. Outside of stream crossings, any road-derived sediment would be directed onto the forest floor through cross drains where it would be filtered before reaching stream channels. Based on the well-vegetative cover within the riparian and ditch line, the only possibility of fine sediment reaching the stream channels would be at the stream crossings, and would be further limited by distances from the nearest cross drains to the stream crossings. Sediment release would be diluted and dispersed by the baseline discharge volume resulting from the first flush precipitation events of the season. These first hydrologic events of the wet season would also transport fine sediment collected naturally by the watershed over the dry season. The amount of sediment released from timber hauling activities would be limited by the filtration effect of the vegetative cover within the riparian area and ditch line. The amount of sediment released into the stream channel from these activities would be indistinguishable from back ground levels (baseline conditions) and would not impact fisheries habitat further downstream.

Irreversible and Irretrievable Commitment of Resources - Some irreversible and irretrievable commitment of resources would result from the implementation of this project. An irreversible commitment is a commitment that cannot be reversed whereas an irretrievable commitment is a commitment that is lost for a period of time. An irreversible commitment of petroleum fuels for logging and timber hauling would result from the proposed action.

C. Cumulative Impacts Analysis

The following paragraphs discuss the cumulative impacts of the action. These impacts are described for federal lands in the FSEIS beginning on page 3&4-4 and throughout the chapter based on the resource affected. The Siuslaw Watershed Analysis provides baseline information with which to assess potential future cumulative impacts. Unless otherwise noted, these effects are described in the context of the fifth-field watershed scale.

There has been a continued conversion of late seral and old-growth habitat on private, industrial forest lands to early seral stages. Current management strategies on most of this private land would preclude the development of older seral conditions in the future on their land. Private landowners control 58 percent of the Upper Siuslaw River Watershed. Of this over 46 percent are industrial

forestlands with the remainder managed by private landowners with varying agricultural and forestry objectives (Siuslaw WA, pg. 1-3). Private forestlands managed for timber production are normally harvested in accordance with state forest practice standards between 40 and 60 years of age. As these areas are replanted they will maintain a mosaic pattern of forest stand ages across the landscape. The majority of private lands will maintain early and mid-seral forest type characteristics on a 40 to 60 year rotation.

Wildlife Habitat – The Siuslaw Watershed Analysis (1996) reports that there is currently approximately 15,700 acres of habitat suitable for spotted owls and bald eagles within the watershed. The proposed action is not anticipated to remove or modify any currently functioning suitable owl or bald eagle habitat. The watershed analysis indicates that other watersheds in the Coast Range have greater densities of snags than the Siuslaw watershed. Project Design Criteria included in this analysis provide protection to snags unless they pose a safety hazard (see paragraph II.C.3.a). Furthermore, previous experience with snag retention in timber sale projects suggests that less than five percent of snags need to be felled for safety concerns. The Siuslaw Watershed Analysis also states that the amount of Coarse Woody Debris within old and mature forest stands exceed ROD standards. The extraction of logs as proposed is expected to have a negligible impact on the amount of downed woody material remaining in the watershed.

Soil Productivity - Given that this project would cover 0.1% of the subwatershed and 0.02% of the watershed and that the project's impacts to soil productivity would be limited to 1-2% of the skyline yarded ground, the net productivity loss at the subwatershed and watershed scales would be minute. Harvest-related landslides are expected to be few, small, and inconsequential to possible cumulative effects of soil productivity.

Water Quality and Hydrologic Processes - Any harvest, haul, and road renovation related sediment input into the streams as a result of the action alternative would be indistinguishable from background levels at the subwatershed and watershed scales. Though this project's contribution to landslide potential would be small, the cumulative effect of landslides occurring throughout the watershed over time would contribute to the ongoing process of storage of landslide materials in the streams and floodplains. During extremely high flow events (such as 100 year events), these materials would be carried downstream resulting in a short-term increase in sediment and turbidity, a short and long-term increase in large wood downstream. The effect of the proposed action would not alter water chemistry, water temperature, water yield, or peak flows at the project level, subwatershed, or watershed scales.

Fisheries Habitat – The proposed action would not have any direct effect on fisheries habitat down-stream from the blowdown area. Course woody debris would be maintained at recommended levels within the project area. Impacts to the intermittent streams within the blowdown units would not filter down into the fish-bearing streams due to the distance from the proposed action to fish-bearing streams and the PDC's incorporated to minimize soil disturbance outside of the riparian buffer. Course woody debris would be maintained at recommended ranges for retention levels appropriate to a mid-seral stand. Re-distribution of the blowdown logs into Smith River and its tributaries would enhance fisheries habitat within the Upper and Middle Smith River watersheds potentially increasing salmonid spawning and rearing habitat.

V. CONTACTS, CONSULTATIONS, AND PREPARERS

A. Agencies, Organizations, and Persons Consulted

The Agency is required by law to consult with certain federal and state agencies (40 CFR 1502.25).

1. **Threatened and Endangered (T&E) Species Section 7 Consultation -** The Endangered Species Act of 1973 (ESA) requires consultation to ensure that any action that an Agency authorizes, funds or carries out is not likely to jeopardize the existence of any listed species or destroy or adversely modify critical habitat.

a. The Roseburg District's Biological Assessment (BA) for T&E wildlife species consultation was initially submitted to the **US Fish and Wildlife Service** (FWS) on June 15, 2004. The BA made the determination that this project would result in a "not likely to adversely affect " for the spotted owl, murrelet, or bald eagle. A Biological Opinion is expected in mid-October.

b. The BLM has made a determination that this project would be "no effect" for listed fish species, therefore Section 7 consultation with the **National Oceanic and Atmospheric Administration - fisheries** (NOAA) is not required. Federal agencies are required under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) to consult with NOAA Fisheries regarding actions that are authorized, funded, or undertaken by that agency that may adversely affect Essential Fish Habitat (EFH). Activities associated with the proposed project would not adversely affect EFH for coho and chinook salmon therefore EFH consultation is not required.

2. **Cultural Resources Section 106 Consultation -** National Historic Preservation Act (Section 106) responsibilities under the 1997 National Programmatic Agreement and the 1998 Oregon Protocol has been completed. No consultation with the **State Historical Preservation Office** (SHPO) was required.

B. Public Notification

1. Notification was provided to affected **Tribal Governments** (Confederated Tribes of the Coos, Lower Umpqua and Siuslaw; Grande Ronde; Siletz; and the Cow Creek Band of Umpqua Indians). No comments were received.

2. The **general public** was notified via the *Roseburg District Planning Update* (Spring 2003) which was sent approximately 150 addressees. These addressees consist of members of the public that have expressed interest in Roseburg District BLM projects. Comments were received from Francis Eatherington representing Umpqua Watersheds, Inc. (see Appendix D - Issue Identification Summary).

3. Notification will also be provided to certain **State, County and local government** offices (see Appendix G - Public Contact).

4. A 30-day **public comment period** will be established for review of this EA. A Notice Of Availability will be published in *The News-Review*. This EA and its associated documents will be sent to all parties who request them. If the decision is made to implement this project, a notice will be published in *The News-Review*.

C. List of Preparers

Core Team

Chip Clough	Fisheries
Denise Dammann	Hydrology / Project Lead
Craig Holt	Layout Forester
Al James	Silviculture
Jim Luse	EA Coordinator / EA Preparer
Rex McGraw	Wildlife
Evan Olson	Botany

Expanded Team - Consulted

Isaac Barner	Cultural Resources
Kevin Cleary	Fuels Management
Dan Couch	Watershed Analysis
Dan Cressy	Soils

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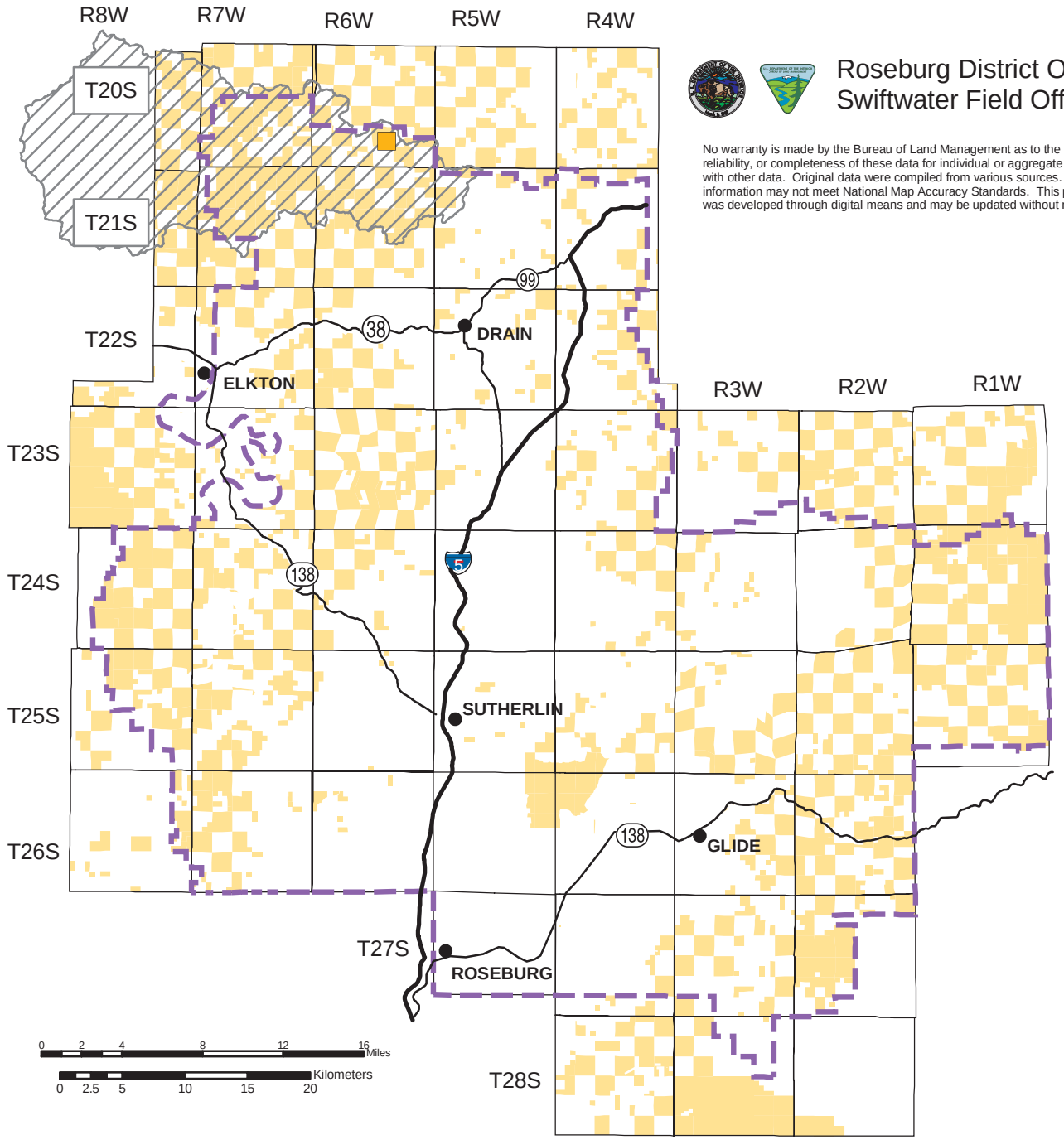
Other references as cited in the individual Specialist's Reports (Appendix F - Analysis File).

Appendix A
Vicinity Map

Summit Creek Coarse Wood Redistribution Project

EA No. OR-104-04-05



Roseburg District Office
Swiftwater Field Office

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

Legend

- Swiftwater RA Boundary
- Interstate Highway
- Oregon Highway
- Towns
- BLM Managed Lands
- Upper Smith River 5th Field Watershed
- Project Area

N
W E
S

Appendix B

Project Location Map

Roseburg District Office
Swiftwater Field Office

Summit Creek Coarse Wood Redistribution Project

EA No. OR-104-04-05

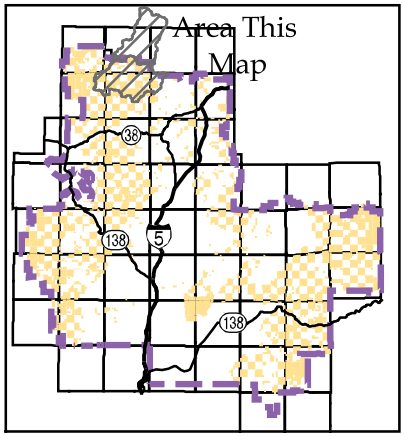
N
W E
S

Legend

- Project Area
- Swiftwater Resource Area Boundary
- Secondary Woods Roads
- Watershed Boundary
- County Road
- Streams

Ownership

- BLM
- Private



R 06 W

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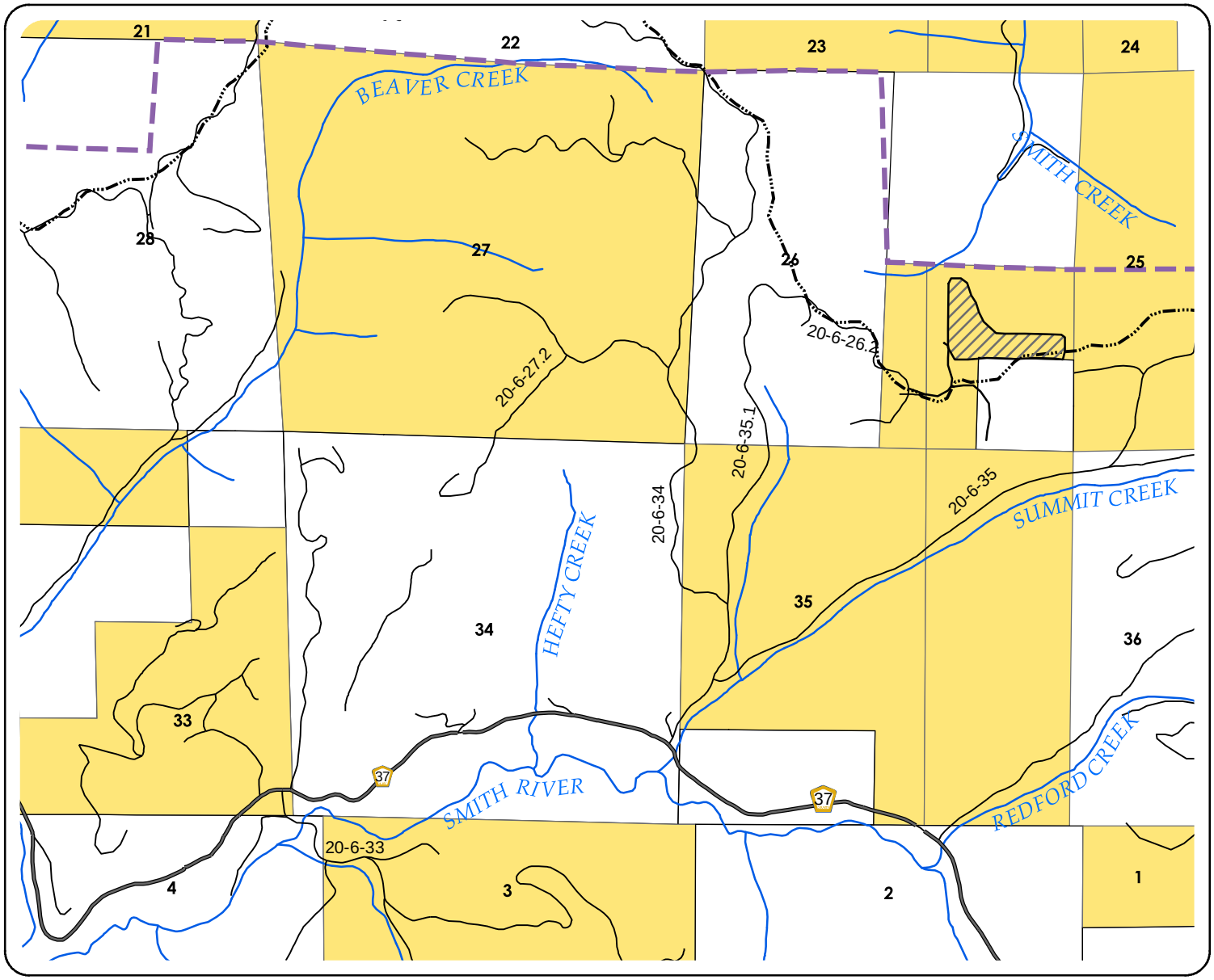
T 21 S



0 0.125 0.25 0.5 0.75 1 Miles

0 0.25 0.5 1 1.5 2 Kilometers

APPENDIX C

INDIVIDUAL UNIT DESCRIPTION

Project Summary Table

EA Unit	Acres	Yarding System (ac.)			Fuel Treat.	Remarks
		Aerial	Cable	Ground		
1	10		OES		P&BL	
2	5		OES		"	
Total	15					

Yarding System
OES = Cable Yard, One End Suspension Required

Fuel Treatment
P&BL = Pile and Burn Landings

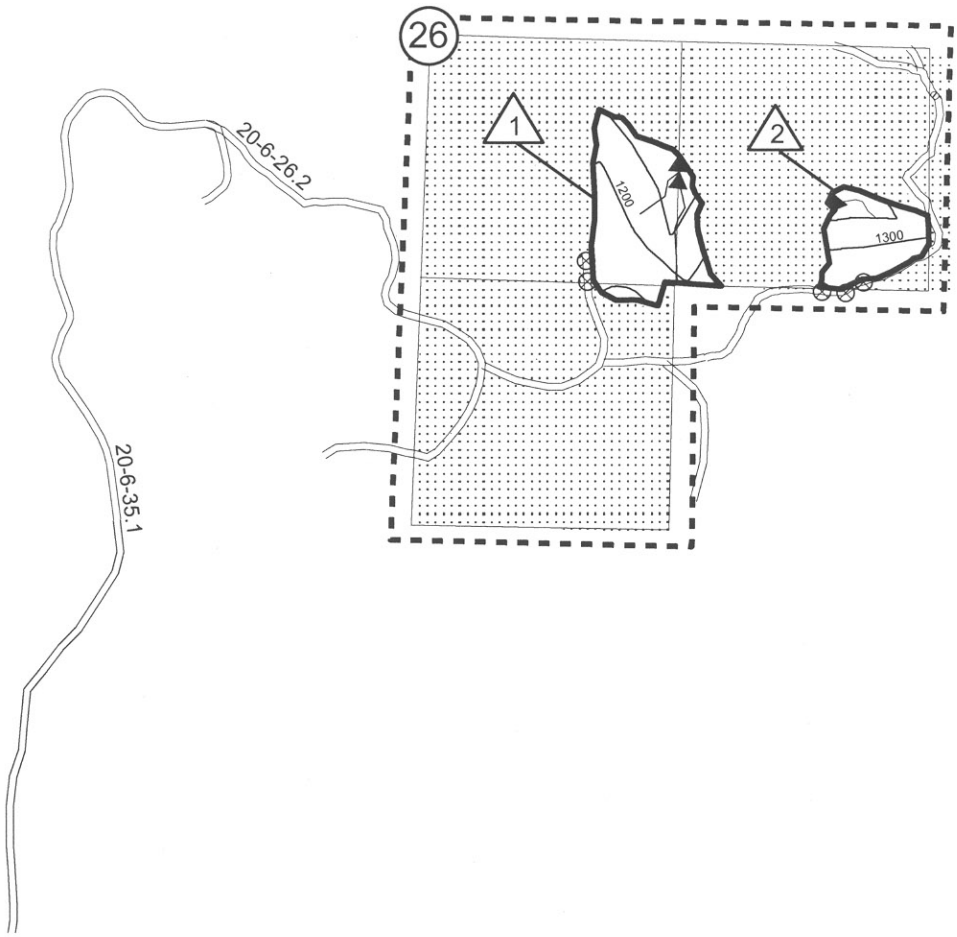
Directions to the Project Area

Follow Interstate 5 north from Roseburg to Exit 150 (Yoncalla). Proceed north on State Highway 99 to Drain then approximately one and nine tenths (1.9) miles to County Road 37 (Smith River Road). Turn left onto County Road 69 and travel approximately eleven and two tenth (11.2) miles to the junction of BLM Road No. 20-6-34.0. See Appendix B map for directions to the individual units.

Units are marked with boundary posters and blazed and orange painted trees.

Appendix C
Unit Map

Summit Creek Coarse Wood
Redistribution Project



LEGEND

- Salvage Area- Cable Yarding
- Reserve Area
- Boundary- Project Area
- Boundary- Unit
- Stream
- Existing Road
- Log Landing Area

Scale: 1" = 1000 Ft.

N

APPENDIX D

ISSUE IDENTIFICATION SUMMARY

This appendix summarizes the issues that were identified pertinent to this project. No further analysis was deemed necessary in that the mitigations specified below are considered adequate to remove the issue from needing to be analyzed in the main body of the EA.

A. Issues Identified During Project Design

The following issues were identified during project design. These issues arose from Specialist input as well as public comments that were received. A given issue can be eliminated from further analysis for one or more of the following reasons: (1) it is beyond the scope of this analysis, (2) the impacts were anticipated and analyzed in the FEIS, (3) Project Design Criteria (PDC) included in the preferred alternative would be adopted to mitigate the anticipated environmental impacts of specific activities, and (4) the issue does not meet the objectives and purpose of the project. Section II, paragraph C (pg. 5) provides a list of specific PDC incorporated into the preferred alternative to deal with these issues.

Issue #1: Does this area meet the RMP criteria to permit salvage logging within the Late-Successional Reserve?

Discussion: The RMP only permits salvage logging in the Late-Successional Reserve if the blowdown event exceeds 10 acres and the canopy closure has been reduced to less than 40 percent (pg. 30). The entire area impacted is approximately 20 acres but is variable ranging from little change in canopy closure to openings larger than a quarter acre.

Mitigation: Approximately five acres of minimally impacted area were removed from harvest considerations leaving two units, one of ten acres and another of five acres that meets RMP criteria.

Issue #2: Possible Beetle Infestation if Down Wood Remains on Site.

Discussion: There is always a concern that leaving large amounts of down wood would provide the environment for beetle populations to expand resulting in mortality to live trees. The risk of Douglas-fir beetle killing live Douglas-fir because of the blow down trees is long past. It does not appear that any live trees have died recently as a result of Douglas-fir beetle. Leaving some of the down logs should have no effect on Douglas-fir beetle populations.

Mitigation: None required.

Issue #3: Wildfire Hazards Due to Existing Down Wood Amounts

Discussion: There has always been a concern that blowdown events leaving large amounts of down wood could worsen the risk of wildfire due to heavy fuel loadings. Heavy fuels in a wildfire situation result in high intensity fires that are hard to suppress and control. The "resistance to control" requires the use of heavy firefighting equipment and greater amounts of resources to suppress. The large volume of CWD presents a risk or threat to both public and private lands in event of wildfire.

Mitigation: Salvage of excess amounts of down timber to lower levels would lessen the amount of heavy fuel loading and lessen the fuel hazard.

Public Issues:

Comments were received from one organization. These Issues are summarized as follows:

1. *The EA should document the cause of the blow-down.*
   Response: The baseline condition for the proposed project area is a stand that has experienced substantial blowdown. The scope of the project is to determine if excess down wood can be salvaged for use in a nearby stream restoration project. Secondly, if any logs, in excess of those needed for down wood component in the stand and the restoration project, be sold. The issue of the EA is not to analyze what caused the event but rather what should be done with the excess down wood now that the event has happened (ID Team Minutes, 2/19/04). However, this issue is addressed in the EA (pg. 10) as follows:
   > "The trees are anchored in this weak bedrock material. The incompetence of the bedrock, combined with steep-sloped ridgeline topography and exposure to the prevailing southwest winds are contributing factors to blowdown susceptibility of this stand. Evidence of past scarps and logs in adjacent stands indicates historic blowdown in this vicinity."

2. *The EA should reference these [NFP ROD] specific guidelines and show how the project complies with them.*
   Response: Part of proper NEPA analysis is to insure that a project will comply with existing plans and applicable statute and law. These guidelines are addressed as Project Design Criteria on page 4 of the EA.

3. *The entire eastern leg of the unit likely has a canopy closure greater than 40%. Perhaps this area should be dropped from salvage.*
   Response: This issue was analyzed by the Silviculturalist who estimates this portion at 16% canopy closure.

4. *The scoping information says that "one third of the logs would be decked for sale in the commercial log market". Isn't it premature to make this decision? First you have to determine what the "province-level plans" have established as appropriate to leave (c-14). . . . The Northwest Forest Plan says: "...management should retain adequate coarse woody debris quantities in the new stand so that in the future it will still contain amounts similar to naturally regenerated stands. The analysis that determines the amount of coarse woody debris to leave must account for the full period of time before the new stand begins to contribute coarse woody debris." (c-14). This analysis should be clearly documented in the EA. Only after the analysis is complete, with public input, should you decide to sell some of the blow-down.*

Response: The EA is not a decision document but the analysis that supports an ultimate decision. The statement that "one third of the logs would be decked for sale in the commercial log market" (BLM letter of 12/16/03) is only a projection to inform the public of the proposed direction for the project. Environmental analysis modifies initial projections which are then finalized as a signed decision.

B. Issues Specified by Regulation

"Critical Elements of the Human Environment" is a list of elements specified in BLM Handbook H-1790-1 that must be considered in all EA's. These are elements of the human environment subject to requirements specified in statute, regulation, or Executive Order. These elements are as follows:

1. Air Quality
2. Areas of Critical Environmental Concern (ACEC)
3. Cultural Resources
4. Environmental Justice
5. Farm Lands (prime or unique)
6. Floodplains
7. Invasive, Nonnative Species
8. Native American Religious Concerns
9. Threatened or Endangered Species
10. Wastes, Hazardous or Solid
11. Water Quality, Drinking / Ground
12. Wetlands / Riparian Zones
13. Wild and Scenic Rivers
14. Wilderness

These resources or values (except item #9) were not identified as issues to be analyzed in detail because: (1) the resource or value does not exist in the analysis area, or (2) no site specific impacts were identified, or (3) the impacts were considered sufficiently mitigated through adherence to the NFP S&G's and RMP Management Actions/Direction therefore eliminating the element as an issue of concern. These issues are also briefly discussed in Appendix E ("Critical Elements of the Human Environment"). Item #9 is previously addressed in this EA and the Biological Assessment which is prepared for consultation required by the Endangered Species Act (Appendix F).

The following items are not considered a Critical Element but have been cited by regulation or executive order as an item warranting consideration in NEPA documents:

Healthy Lands Initiative - This project would not violate the Healthy Lands Initiative. This project would be in compliance with the RMP which has been determined to be consistent with the standards and guidelines for healthy lands (43 CFR 4180.1) at the land use plan scale and associated time lines.

National Energy Policy - Executive Order 13212 provides that all decisions made by the Bureau of Land Management will take into consideration adverse impacts on the President's National Energy Policy. This project would not have a direct or indirect adverse impact on energy development, production, supply, and/or distribution and therefore would not adversely affect the President's National Energy Policy.

C. Watershed Analysis and Late-Successional Reserve Assessment

The *Siuslaw Watershed Analysis* does not make any specific recommendations for blowdown events.

The *South Coast Province Late-Successional Reserve Assessment* (LSRA) anticipates salvage as an appropriate management tool with the proviso that "operations should not diminish late-successional habitat suitability now or in the future." (pg. 41). The LSRA guidelines (Table 12, pg. 61) were used to determine appropriate levels of Course Woody Debris (CWD) to retain on-site. The LSRA recommends a target value of 1,731 cu ft/acre (on average) of CWD. This target value in the LSRA was based on data from Spies (1988) and included CWD in Decay Classes 1-5. Since the project proposes the removal of class 1 and 2 logs and not the removal of class 3-5 logs, the target value was adjusted from the LSRA to reflect the amount of class 1 and 2 logs that should be left after the proposed action. CWD surveys from seven prior timber sale projects in the Coast Range (from local plot data) indicate that approximately 49% of the volume of logs is in Decay class 1 and 2. Therefore, the target value for class 1 and 2 logs to leave on site for this project (848 cu ft/acre) was adjusted to 49% of the target set forth in the LSRA (1,731 cu ft/acre) which included class 1-5 logs.

APPENDIX E

CRITICAL ELEMENTS OF THE HUMAN ENVIRONMENT

Element	Relevant Authority	Environmental Effect
Air Quality	The Clean Air Act (as amended)	**Minimal** - Drift smoke within the local airshed from pile burning is possible. Dust particles may be released into airshed as a result of log hauling.
Areas of Critical Environmental Concern	Federal Land Policy and Management Act of 1976 (FLPMA)	**None** - Project area is not within or near a designated or candidate ACEC.
Cultural Resources	National Historic Preservation Act of 1966 (as amended)	**"No Effect"** - See cultural clearance form 4/23/04
Environmental Justice	E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 2/11/94. ***This EO requires that agencies insure that adverse health or environmental effects do not disproportionately affect minority or low-income populations.***	**None** - The proposed project areas are not known to be used by, or disproportionately used by, Native Americans, minorities or low-income populations for specific cultural activities, or at greater rates than the general population. According to 2000 Census data approximately six percent of the population of Douglas County was classified as minority status (*Oregonian*, Pg. A-12; March 15, 2001). It is estimated that approximately 15% of the county is below the poverty level (Frewing-Runyon, 1999).
Farm Lands (prime or unique)	Surface Mining Control and Reclamation Act of 1977 ***This act seeks to identify and restore prime farmlands and other unique federal land characteristics.***	**None** - "No discernable effects are anticipated" (PRMP pg. 1-7)
Floodplains	E.O. 11988, as amended, Floodplain Management, 5/24/77 ***This EO requires agencies to determine if a proposed action will occur in a floodplain and that the action will avoid adverse impacts associated with occupancy and modification of floodplains and avoids floodplain development.***	**None** - Project is not within 100 yr. floodplain.

Element	Relevant Authority	Environmental Effect
Invasive and Nonnative Species	Lacey Act, as amended; Federal Noxious Weed Act of 1974 as amended; Endangered Species Act of 1973, as amended; and EO 13112 on Invasive Species dated February 3, 1999. ***This EO requires the prevention of introduction of invasive species and to provide for their control to minimize their economic, ecological, and human health impacts.***	Project Design Criteria would be included in the proposed action to prevent or control the spread of noxious weeds (EA, pg. 7).
Native American Religious Concerns	American Indian Religious Freedom Act of 1978 ***This act seeks to protect and preserve for American Indians right of exercise of traditional religion including access to religious sites.***	No concerns were noted as the result of public contact including impacts to Indian Trust Resources. Project is within Coos, Lower Umpqua, and Siuslaw tribal area.
Threatened or Endangered Species	Endangered Species Act of 1973 (as amended) The Pacific Coast Recovery Plan for the American Peregrine Falcon, 1982 Columbian White-tailed Deer Recovery Plan, 1983 Recovery Plan for the Pacific Bald Eagle, 1986 Recovery Plan for the Marbled Murrelet, 1997	**Botanical** - No T&E species noted (Specialist Report) **Animals** - See Appendix F Wildlife Table. T&E species not specifically mentioned do not exist in the analysis area.
Wastes, Hazardous or Solid	Resource Conservation and Recovery Act of 1976 Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended ***These laws regulate hazardous waste that endangers public health or the environment.***	**None** - Applicable HazMat policies would be in effect.
Water Quality, Drinking / Ground	Clean Water Act of 1987; Safe Drinking Water Act Amendments of 1996; EO 12088, Federal compliance with pollution control standards (October 13, 1978) EO 12589 on Superfund implementation (February 23, 1987); and EO 12372 Intergovernmental review of federal programs (July 14, 1982)	**None** - Project is not in a municipal watershed or near a domestic water source.

Element	Relevant Authority	Environmental Effect
Wetlands/Riparian Zones	E.O. 11990, Protection of Wetlands, 5/24/77 ***This EO requires federal agencies to avoid destruction or modifications of wetlands and to avoid undertaking or providing assistance for new construction located in wetlands.***	**None** - "The selected alternative [of the FEIS] complies with [E.O. 11990]..."(ROD p. 51, para.7). **or** These alternatives do not destroy, modify, or undertake/assist new construction located in wetlands.
Wild and Scenic Rivers	Wild and Scenic Rivers Act of 1968 (as amended) The North Umpqua Wild and Scenic River Plan (July 1992)	**None** - Project is not within the North Umpqua Scenic River corridor.
Wilderness	Federal Land Policy and Management Act of 1976 Wilderness Act of 1964	**None** - "There are no lands in the Roseburg District which are eligible as Wilderness Study Areas." (RMP pg. 54).

OTHER RESOURCES CONSIDERED

Resource	Environmental Effect / Concerns
Land Use (Leases, Grazing etc.)	**None** - Project has no conflicting land uses (Specialist's Report 3/04/04). Roads are encumbered under Right-of-Way Agreement # R-1022A (Weyerhaeuser Co.) and R-645A (Seneca Jones).
Minerals	**None** - Project has no mining claims (Specialist's Report 3/10/04).
Recreation	**Minimal short-term impacts** - "The activity will not cause create long term impacts on the recreational use of these areas once logging has been completed" (Specialist's Report 6/28/04).
Visual	**None** - "The entire project falls within Visual Resource Management Class IV. . . . No visual constraints would be required." (Specialist Report 6/28/04)
Other (Adjacent Landowners)	**None -** No small adjacent landowners are in the vicinity of this project No registered domestic water use.